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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,903	04/03/2002	Franck Abelard	PF990066	6844

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Joseph S Tripoli
Thomson Multimedia Licensing
Patent Operations
CN 5312
Princeton, NJ 08543-0028

EXAMINER

DANG, HUNG Q

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/089,903	Applicant(s) ABELARD ET AL.	
	Examiner Hung Q. Dang	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/03/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 11/15/2006 have been fully considered by examiner.

In pages 4, applicant argues, with respect to amended independent claim 1; that Naimpally fails to disclose or teach the limitations of receiving a stream of data packets, each data packet being associated with one of N packet identifiers; and providing N ($N > 1$) buffers for receiving respectively packets corresponding to one of N packet identifiers. Applicant further argues that Yoneda et al. fail to teach or suggest the limitations of monitoring a total quantity of data stored in the N buffers; and triggering a writing process of the data contained in the buffers to the recording medium when said total quantity of data reaches a predetermined level. Applicant also suggests that claims 2-4 are allowable because they depend therefrom, and claims 4, 5-6 are allowable because they recite the features of present claim 1 in apparatus form.

In response, the examiner respectfully disagrees. As cited by the examiner in the First Office Action, Naimpally in column 3, lines 9-15; column 7, lines 26-39; and column 8, lines 5-32) clearly discloses receiving a multi-program transport stream, which is a stream of data packets. Each data packet has a PID, which is a packet identifier, so that it can be identified as to belong to a particular program to be recorded. As stated, each PID identifies a program and its packets. The transport stream is of multi-program, that is, it contains packets for more than one programs. Let's call N the number of programs contained therefrom. Then, N is greater than one. Furthermore, there are N programs in

the transport stream, then there are N PIDs to identify corresponding N programs. Hence, the limitation of "receiving a stream of data packets, each data packet being associated with one of N packet identifiers" is clearly disclosed.

Regarding the limitation of "providing N ($N > 1$) buffers for receiving respectively packets corresponding to one of N packet identifiers", the examiner respectfully asserts that it is clearly disclosed by Naimpally. Refer to Fig. 1A of Naimpally. For illustrations, Naimpally discloses three decoder models 122, 124, and 126, each consists of a demultiplexer 128 and a buffer 130. So there are three ($N=3$) buffers to receive the multi-program transport stream sent out by component 110. Each buffer stores data for a particular program selected for that particular decoder. The de-multiplexers 128 serve to select packets of a particular PID selected for the corresponding decoders and send the packets to corresponding buffers. There are three buffers for receiving packets of three different PIDs in this case. Hence the limitation of "providing N ($N > 1$) buffers for receiving respectively packets corresponding to one of N packet identifiers" is fully disclosed by Naimpally.

Furthermore, the examiner respectfully asserts that Yoneda et al. fully disclose the limitations of "monitoring a total quantity of data stored in the N buffers"; and "triggering a writing process of the data contained in the buffers to the recording medium when said total quantity of data reaches a predetermined level". In column 47, lines 7-23, Yoneda discloses two buffers individually controlled and monitored. Since they can be monitored and controlled individually, the total data in the buffers are also monitored and controlled successfully. Hence, the limitation of "monitoring a total

quantity of data stored in the N buffers" is disclosed. In addition, the cited reference also disclose, when either one of the buffers is filled up, a writing process to a storage unit is started. Thus, the limitation of "triggering a writing process of the data contained in the buffers to the recording medium when said total quantity of data reaches a predetermined level" is disclosed with the predetermined level in this case being established by the condition of either one of the buffers being filled up.

For the reasons described above, the examiner believes the combination of Naimpally, Yoneda et al., and Deo et al. successfully discloses the limitations of independent claims 1, 5 and their dependent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naimpally (US Patent 5,619,337), and Yoneda et al. (EP 0 841 819).

Claim 1 recites a method for recording data in a digital video processing device connectable to a recording medium, comprising the steps of: (1) receiving a stream of data packets, each data packet being associated with one of N packet identifiers (PID); (2) providing N ($N > 1$) buffers for receiving respectively packets corresponding to one of N packet identifiers; (3) monitoring a total quantity of data stored in the N buffers; and

(4) triggering a writing process of the data contained in the buffers to the recording medium when said total quantity of data reaches a predetermined level.

Claim 2 recites the predetermined level corresponds to a size of a data recording unit on the recording medium, minus a quantity of space reserved to service information.

Claim 3 recites the writing step comprising the writing of the data in the different buffers to a same recording unit.

Naimpally teaches a recording system, hence a method, to record one or more programs from a multi-program transport stream, comprising the steps of: (1) receiving a stream of data packets, each data packet being associated to one of N packet identifier (PID) (column 3, lines 9-15; column 7, lines 26-39; column 8, lines 5-32); (2) providing N ($N > 1$) buffers, for receiving respectively packets corresponding to one of N packet identifiers ("components 122, 124, 126", "buffer 130" in Fig. 1A; column 3, line 62 – column 4, line 6);

Naimpally does not teach monitoring the total quantity of data stored in the buffers. Also, Naimpally does not teach triggering a writing process of the data when the said total quantity of data reaches a predetermined level. But Naimpally does teach a modulator to modulate the multiplexed stream for transmission (Fig. 1A).

Yoneda et al. teach using the same recording medium (column 47, lines 8-11) and monitoring the total quantity of data stored in a buffer and triggering a writing process of data stored in the buffer to recording medium when the total quantity data reaches a predetermined level, specifically, when the buffer is full (column 47, lines 7-

15). Yoneda et al. also teach the predetermined level corresponds to the size of a data recording unit on the recording medium, minus the quantity of space reserved to service information (column 47, lines 33-54).

One of ordinary skill in the art at the time the invention was made would have been motivated to substitute the modulator (FEC, Modulator 120 in Fig. 1A) taught in the recording system by Naimpally with the buffering means taught by Yoneda et al. to make a multi-program recording device since the buffering means taught Yoneda et al. uses an internal buffer of small capacity, so that the quantities of coded audio and video information temporarily stored in these buffers are reduced (column 49, lines 17-23).

Claims 5 and 6 recite a digital video processing device comprising a demultiplexer and a recording medium, and further comprising: (1) more than one buffers; (2) means for controlling the writing of de-multiplexed data packets, each data packet being associated with one of N packet identifiers, into said buffers, where each buffer receives data packets corresponding to a specific packet identifier, and for controlling the quantity of data packets in each buffer in order to trigger the writing of the buffer contents to the recording medium when the sum of data packets in all buffers reaches a predetermined level, which corresponds to a size of a data recording unit on the recording medium.

Naimpally teaches a digital video processing device comprising a de-multiplexer and a recording medium (Tuner 210, Transport Demux 218 in Fig. 2; column 4, lines 33-35), characterized in that it further comprises: (1) more than one buffers ("components 122, 124, 126", "buffer 130" in Fig. 1A; column 3, line 62 – column 4, line 6); (2-i) a

means for controlling the writing of de-multiplexed data packets, each data packet being associated to one of N packet identifiers, into said buffers, where each buffer receives data packets corresponding to a specific packet identifier ("components 122, 124, 126", "buffer 130" in Fig. 1A; column 3, line 62 – column 4, line 6);

Naimpally does not teach (2-ii) controlling the quantity of data packets in each buffer in order to trigger the writing of the buffer contents to the recording medium when the sum of data packets in all buffers reaches a predetermined level, which corresponds to the size of a data recording unit on the recording medium.

Yoneda et al. teach a means for (2-ii) controlling the quantity of data packets in each buffer in order to trigger the writing of the buffer contents to the recording medium when the sum of data packets in all buffers reaches a predetermined level (column 47, lines 33-54; and "audio buffering means", "video buffering means", "video/audio synchronization means", and "file management means" in Fig. 12), which corresponds to the size of a data recording unit on the recording medium (column 47, lines 15-54).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naimpally and Yoneda et al. as applied to claims 1-3, and 5-6 above, and further in view of Deo et al. (US Patent 6,304,914).

Claim 4 recites the step of writing a header into said recording unit, said header indicating for the data from each buffer: the corresponding packet identifier, the size, and location of the data in the recording unit.

See the teachings of Naimpally and Yoneda et al. above.

Naimpally and Yoneda et al. do not teach the step of writing a header into said recording unit, said header indicating for the data from each buffer: the corresponding packet identifier, the size, and location of the data in the recording unit.

Deo et al. teach the concept of storing more than one data packets destined for the same address by appending them together to produce the compressed data packet which includes a master header (column 1, lines 52-67). The master header comprises the identifiers, the size and the location of individual data packets in the produced packets (column 9, lines 39-48).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the concept of combining small data packets into larger data packets with a header storing the identifiers, the size and the location of individual data packets in the produced packets taught by Deo et al. into the digital video recording system taught by Naimpally and Yoneda et al. to produce a compact packet since, if used in wireless communication, would save a lot of bandwidth (column 1, lines 29-32).

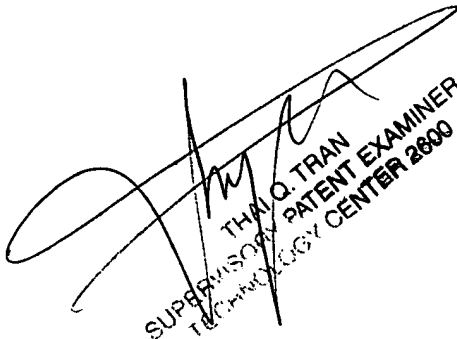
Therefore the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, absent unexpected results to the contrary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
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